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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/663,878	09/15/2000	Akihiro Iino	S004-4102	4174

7590 04/29/2002

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EXAMINER

BUDD, MARK OSBORNE

ART UNIT	PAPER NUMBER
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2834

DATE MAILED: 04/29/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

663878

Applicant(s)

I. n. o. of al

Examiner

M. Budd

Group Art Unit

2834

—The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address—

Period for Response

A SHORTENED STATUTORY PERIOD FOR RESPONSE IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a response be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for response specified above is less than thirty (30) days, a response within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for response is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to respond within the set or extended period for response will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Status

- ☒ Responsive to communication(s) filed on 3-26-02.
- ☒ This action is **FINAL**.
- ☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- ☒ Claim(s) 29-50 is/are pending in the application.
- Of the above claim(s) _____ is/are withdrawn from consideration.
- ☒ Claim(s) 49 & 50 is/are allowed.
- ☒ Claim(s) 29-39 and 39-48 is/are rejected.
- ☒ Claim(s) 38 is/are objected to.
- ☐ Claim(s) _____ are subject to restriction or election requirement.

Application Papers

- ☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.
- ☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.
- ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d)

- ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
 - ☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been received.
 - ☐ received in Application No. (Series Code/Serial Number) _____.
 - ☐ received in this national stage application from the International Bureau (PCT Rule 1.7.2(a)).

*Certified copies not received: _____.

Attachment(s)

- ☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____
- ☒ Notice of References Cited, PTO-892
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Interview Summary, PTO-413
- ☐ Notice of Informal Patent Application, PTO-152
- ☐ Other _____

Office Action Summary

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The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 29-33 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Honda (941), Honda (275) or NAIA.

Each of Honda (941) (figs. 5, 12 & 17), Honda (275) (Figs. 10-13 & 15) and NAIA (figs. 1 & 2) teach the linear motion mechanism wherein the rotary motion of a piezoelectric motor is converted into linear motion. They do not explicitly teach a separate pressurizing bias between the moving body and the transmission device. However, supplying a necessary element to keep the parts working together would have been obvious to one of ordinary skill in the art as an inoperable device would be self evident (self revealing) and need correction.

Claim 34 is rejected under 35 U.S.C. 103(a) as being unpatentable over Honda (941), Honda (275) on NAIA in view of Okazaki or Imanari. The Honda and NAIA teachings were discussed above in regard to parent claim 29. This claim adds using a standard position sensor and servo loop to control the motor. Both Okazaki and Imanasi show this to be standard procedure to allow for accurate positioning of the moveable body. Thus to incorporate this known system for use with other motors would have been obvious to one of ordinary skill in the art.

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Claims 36, 37, 39 and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyata.

Note Miyata figs., 5 and 10 wherein the cam is the edge of the slot cut in the rotor. This allows positive driving in two directions. A sample single sided cam could be used (less cost) is a positive drive were not desired in both directions. Note that the omission of an element with the consequent loss of its function has long been held to be within the skill expected of the routineer and therefore obvious to one of ordinary skill in the art.

Claim 40 is rejected under 35 U.S.C. 103(a) as being unpatentable over Miyata in view of Imanari or Okazaki.

This claim adds the position sensor and feedback drive to parent claim 36, and is obvious for the same reasons set forth in regard to claim 34; except this time Miyata teaches the specific motor structure.

Claims 42, 43, 45, 46 and 48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Adachi.

Adachi (Figs. 4) teaches s a supersonic motor w/shaft electrode piezoelectric element first and second transmission members, one pivoted. The moving body is not explicitly shown, but it is obvious that any body coupled to the end of second transmission element (lever #6) would be moved in a direction crosswise to the motor shaft. Adachi also does not show the pressurizing member between the body and the transmission. However, as noted in regard to claim 29,

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supplying this element if necessary would have been self evident (and therefore obvious) to one of ordinary skill in the art.

Claims 44 and 47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Adachi in view of Imanari or Okazaki.

These claims add the provision of a position sensor and feedback servo loop to parent claims 42 and 46. As noted in regard to claims 34 and 40, provision of a position detector and servo loop to control the position of any known piezoelectric motor structure would have been obvious to one of ordinary skill in the art.

Claim 38 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 49 and 50 are allowed.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

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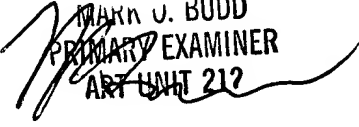
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CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Budd/ds

04/24/02


MARK J. BUDD
PRIMARY EXAMINER
ART UNIT 212